

# **Horniman Museum -Study Collections Centre**

# **Ceiling Works**

# **Pre-Construction Information**

Directors

London

Norwich

Cambridge

1-5 Offord Street London N1 1DH

6 Upper King Street

Norwich NR3 1HA Telephone 01603 628 074

Telephone 020 7700 6666

16 Signet Court Swann Road Cambridge CB5 8LA Telephone 01223 656 058

design@conisbee.co.uk www.conisbee.co.uk

Tim Attwood BSc CEng MIStructE Tom Beaven BEng (Hons) CEng MIStructE Allan Dunsmore BEng (Hons) CEng FIStructE MICE Richard Dobson MEng CEng MIStructE Paul Hartfree IEng MICE MCIHT FGS Ben Heath BEng CEng MIStructE Kevin Clark Head of Heritage Engineering, BSc (Hons) PhD DIC

CEng MICE, Conservation accredited engineer (CARE)

David Richards BEng (Hons) ACGI CEng MIStructE Tom Lefever BEng (Hons) CEng C.WEM MICE MCIWEM Nigel Nicholls IEng AMIStructE Denis Kealy BEng (Hons) CEng MIEI MIStructE

Christina Kennedy MEng (Hons) CEng MIStructE Joel Waugh Tech Eng MICE Adam Crump BSc (Hons) Civil Engineering

Beena Doal Head of Finance

#### Consultants

Alan Conisbee BA BAI CEng MIStructE Conservation Accredited Engineer (CARE) Chris Boydell BSc CEng MIStructE FICE Bob Stagg BSc (Hons) CEng FIStructE MICE Terry Girdler BSc (Hons) Eng MSc CEng FICE MIStructE Conservation Accredited Engineer (CARE)

Conisbee is a trading name of Alan Conisbee and Associates Limited Registered in England No. 3958459

Ref: 210783/S Wilkinson Approved By: S Wilkinson

Date: 05 Jan 2022

Status: For Information

Version: 1





# **Table of Contents**

1.0	INTRODUCTION AND INSTRUCTIONS TO TENDERERS	3
2.0	PROJECT DESCRIPTION	5
3.0	CLIENT CONSIDERATIONS AND MANAGEMENT REQUIREMENTS	8
4.0	ENVIRONMENTAL RESTRICTIONS AND EXISTING ON-SITE RISKS	. 13
5.0	SIGNIFICANT DESIGN AND CONSTRUCTION HAZARDS	. 16
6.0	HEALTH AND SAFETY FILE	. 17
7.0	CONSTRUCTION PHASE PLAN CONTENT	. 18
APPEI	NDIX A – COVID-19 CONSTRUCTION SECTOR GUIDANCE	. 19
APPEI	NDIX B – RULES FOR VISITING CONTRACTORS	. 27
APPEI	NDIX C – CONISBEE CONSTRUCTION HAZARD ASSESSMENT	. 33



#### 1.0 INTRODUCTION AND INSTRUCTIONS TO TENDERERS

- 1.1 The Construction (Design and Management) Regulations 2015 apply to this project and place duties on the Client, Principal Designer, Designers, Principal Contractor and Contractors to plan, manage, monitor and coordinate health and safety in the preconstruction and construction phases of the project. Conisbee Structural Engineers are the Principal Designer under the Construction (Design and Management) Regulations 2015 in the pre-construction phase for this project. Details for the client, Conisbee and all other parties to the project, are found together with a description of the project in Section 2.
- 1.2 This Pre-Construction Information is to assist tendering contractors in identifying issues that have been identified as part of the design process and provides a basis for the Construction Phase Plan including details of any significant or unusual residual health or safety hazards or constraints inherent within the site or adjacent areas. The appointed Principal Contractor should identify these issues in their Construction Phase Plan and state how they will deal with them and what controls will be put in place. This document should be used to assist in addressing all issues identified in tender submissions and the appointed Principal Contractor should use it to address issues in their Construction Phase Plan.
- 1.3 The Construction (Design and Management) Regulations 2015 require a Construction Phase Plan to be prepared prior to the commencement of the construction phase of the project and maintained until completion of the construction phase. The purpose of the Plan is to provide information and describe procedures that will ensure the health and safety of all those involved in the project.
- 1.4 A description of the works covered by this plan is provided in Section 2. The plan will draw together all the project-specific information provided by the Client and Designers during the design and early planning stages. It identifies key health and safety issues, in particular those that a contractor might not reasonably be expected to identify. The level of detail found in the plan will be proportionate to the anticipated risks involved in the project. Little emphasis is given to risks that are commonplace or those that a competent contractor would be expected to recognise. Information contained in this plan is intended to alert the contractor to health and safety issues that may have significant resource implications or may affect the way that work is planned and carried out.



1.5 CDM 2015 requires the Client to ensure, the construction phase of any project does not start unless a construction phase plan complying with is in place and is project-specific and suitable for works to start on site. Therefore, prior to the commencement of the construction phase, the Principal Contractor must submit the project-specific construction phase plan to the Client to enable them to ensure compliance with their duties. Where the Client has designated to the Principal Designer the task of reviewing the Construction Phase Plan, a copy of the plan shall also be sent to the Principal Designer.

The Principal Contractor is obliged under Regulation 12 of CDM 2015 to develop the Construction Phase Plan and maintain it until the end of the construction phase.



#### 2.0 PROJECT DESCRIPTION

# 2.1 Project Description and Programme Details:

#### 2.1.1 Site Address

Study Collections Centre
Dreadnought Building
Old School Close
London
SE10 0PG

# 2.1.2 Description of the Project

The works include strengthening and repair of timber ceiling support structures at Third Floor/Attic levels. Renewal of ceiling level insulation. Installation of new walkways and handrails within the attic space and new handrails to the existing access ladder.

Also refer to Preliminaries, Schedule of Work, drawings and specifications in the tender document package.

#### 2.1.3 Programme

Anticipated start date is to be confirmed but anticipated to be late January 2022

Overall site works duration is to be approximately 8 weeks with all works to be completed by 31st March 2022.

Contractor's mobilisation period is 2 weeks.

# 2.2 Project Team

#### 2.2.1 Client

The Horniman Public Museum & Public Park Trust 100 London Road London SE23 3PQ

Contact: Tim Hopkins (Head of Estates)

Tel: 020 8699 1872

Email: thopkins@horniman.ac.uk



# 2.2.2 Contract Administrator

Conisbee Structural Engineers

1-5 Offord Street

London N1 1DH

Contact: Simon Wilkinson

Tel: 07968 856 486

Email: simon.wilkinson@conisbee.co.uk

# 2.2.3 Principal Designer

Conisbee Structural Engineers

1-5 Offord Street

London N1 1DH

Contact: Simon Wilkinson

Tel: 07968 856 486

Email: simon.wilkinson@conisbee.co.uk

# 2.2.4 Quantity Surveyor

Conisbee Structural Engineers

1-5 Offord Street

London

N1 1DH

Contact: Simon Wilkinson

Tel: 07968 856 486

Email: simon.wilkinson@conisbee.co.uk

# 2.2.5 Principal Contactor

To be confirmed



# 2.3 HSE Notification (CDM Regulation 6)

This project not anticipated to be notifiable under the CDM regulations as it is unlikely that the construction period will last longer than 30 working days and (may) have more than 20 workers working at the same time or exceed 500 person days. If this is projected to change during the construction phase, the project must be notified to the HSE by the Principal Contractor.

# 2.4 Use as a Workplace

The project includes areas that shall be used as a workplace within the meaning of the Workplace (Health, Safety & Welfare) Regulations.

# 2.5 Existing Records and Plans

#### 2.5.1 Existing Health and Safety File & Operation and Maintenance Files

None are available for the areas affected by the works

# 2.5.2 Drawings

None

## 2.5.3 Survey Information

An Asbestos R&D survey report will be commissioned by the client and provided in good time prior to commencement of work.



#### 3.0 CLIENT CONSIDERATIONS AND MANAGEMENT REQUIREMENTS

#### 3.1 Structure and Organisation

The Principal Contractor will be required to appoint a person who has responsibility for planning and managing the works as defined within the Construction (Design & Management) Regulations 2015. This person should also be responsible for liaising on health and safety matters.

This person will be expected to have sufficient authority to act on requests from the Client or their nominated representative and be able to provide suitable information on health and safety issues to the Client.

Co-ordination and liaison on health and safety will be principally through the Contract Administrator for client matters.

Where site works interact/overlap with Client activities the Principal Contractor must establish procedures for managing these health and safety overlaps and communicating, when appropriate, directly with the Client and/or the Contract Administrator. These arrangements must not compromise contractual arrangements.

The Principal Contractor must assess the health and safety implications of any design changes, contract instructions or unforeseen eventualities. The Contract Administrator and the Principal Designer must be advised of any significant health and safety risks or significant changes to programme or methods of working resulting from these changes.

The Principal Contractor must also consider how to maintain health, safety and welfare in the context of the COVID 19 pandemic. All applicable legal requirements and best practice advice and guidance must be followed at all times. Construction sector specific guidance is published by the Construction Leadership Council in the current version of the document 'Construction Sector - Site Operating Procedures Protecting Your Workforce During Coronavirus (Covid-19)' (see Appendix A).

# 3.2 CDM Health and Safety Objectives for the Project

The overall objective is to control foreseeable risks to the health or safety of any person carrying out or liable to be affected by the works and to complete the project without fatalities, reportable injuries, diseases or dangerous occurrences affecting employees, subcontractors and others, including the general public.

The safety of visitors and staff within and around the building must be maintained at all times. Refer to the SCC building 'Rules for Visiting Contractors' at Appendix B.



At each project meeting the Principal Contractor will be expected to provide a report on any health and safety matters that have arisen, to include:

- Health and safety incidents
- Time lost due to accidents
- Safety Inspections and Audits (key issues, action)
- HSE visits (observations, enforcement notices, action)
- Implications of developing design issues and changes

#### 3.3 Communication

The Principal Contractor will be required to ensure that all site operatives and visitor have received appropriate inductions and training related to health and safety matters.

The Principal Contractor must ensure that all necessary information related to risk controls and procedures is communicated to contractors and any other relevant parties, including SCC staff when needed. The Principal Contractor's site manager will be primarily responsible.

# 3.4 Site Security

The SCC building will remain occupied (outside site areas) during the works. The Principal Contractor will be responsible for the security of the works and materials on site. Entry to the work site by unauthorised persons is to be barred.

The Principal Contractor is to ensure all operatives and contractor's employees wear clear, visible identification and/or clothing with corporate logos at all times when on site.

#### 3.5 Working Hours

- Monday to Friday 09.00 to 18.00 (TBC with Head of Estates)
- No work must be executed outside these hours without prior approval.
- Deliveries to and from the site should take place between the hours 09.00 and 18.00.

# 3.6 Welfare Provisions

The Client will provide the Principal Contractor with access to suitable welfare facilities in accordance with Schedule 2 of the CDM Regulations 2015, including toilet/washing facilities. The Principal Contractor must maintain the provided facilities for the duration of the project. Current COVID-19 regulations and guidance should be applied where necessary. Location of facilities to be confirmed by the client.



## 3.7 Separation of the Works

The Principal Contractor must ensure that the work areas are safely separated from Client occupied areas and that unauthorised access is prevented.

#### 3.8 Site Traffic Management

The SCC building will remain operational during the works and the Principal Contractor must manage deliveries and waste collections to prevent interactions with staff, members of the public and neighbours.

Materials deliveries and waste collection to be via the external yard area at any time during normal working hours.

All vehicle movements within the grounds of the building are not to exceed 5mph with hazard lights on. Banksmen must be in attendance at all times.

# 3.9 Non-Working Hours

Note that the client's security staff may need access to the sites during non-working hours. Such staff may be unfamiliar with construction sites and may not be wearing personal protective equipment appropriate to construction sites.

At the end of each working day, leave the sites in a tidy condition free from hazards. If hazards remain which cannot be made safe, provide written notice each day to the client.

#### 3.10 Client Rules and Restrictions

The Principal Contractor's site rules must include the following (refer also to the SCC 'Rules for Visiting Contractors at Appendix B):

- Workers to wear visible ID cards and or corporate clothing.
- All visitors to site to report to site manager and sign in/out.
- All deliveries to and from vehicles must be fully supervised by a banksman.
- Agreed access routes to the site must be observed at all times.
- All roads and footpaths must be protected and maintained in a condition suitable for vehicular and pedestrian traffic.
- Adequate safety signs and notices will be displayed indicating the construction area and sufficient lookouts must be provided to prevent unauthorised people entering the construction site.
- Work will cease in an area if material suspected as being asbestos or hazardous in nature is discovered in an unexpected location.



- Provide appropriate fire-fighting equipment and establish a safety zone whenever site welding or any other form of hot work takes place.
- Task appropriate PPE is to be worn at all times on site.
- Drugs and alcohol policy to be applied by the Principal Contractor.
- No smoking on site or anywhere within the buildings.
- No parking on site (unless agreed by the client).
- No radios/personal sound equipment

#### 3.11 Covid-19

The Principal Contractor must follow all legal requirements that may be applicable and adapt working methods accordingly should these requirements change at any time.

Site rules, method statements and risk assessments should be aligned with guidance contained in most current version of the document 'Construction Sector - Site Operating Procedures Protecting Your Workforce During Coronavirus (Covid-19)' published by the Construction Leadership Council (see Appendix A)

#### 3.12 Permits to Work

All work should be planned in advance and agreed with all relevant parties. The Principal Contractor should then issue permits to work where appropriate.

Activities covered by permits to works may include (but are not limited to)

- Demolition
- Electrical and data systems isolation and reconnection (if required)
- Any external site activities

#### 3.13 Fire Prevention

The risk of fire occurring during these works should be low if appropriate prevention measures are applied by the Principal Contractor.

The Principal Contractor shall review the most recent guidance edition of 'Fire Safety in Construction Work' (HSE Guidance HSG168) and develop an appropriate site-specific fire risk assessment and plan that incorporates the requirements of

- CDM Regulation 29: Prevention of risk from fire etc
- CDM Regulation 30: Emergency procedures
- CDM Regulation 31: Emergency routes and exits
- CDM Regulation 32: Fire detection and fire-fighting



This plan is to be included within the overall Construction Phase Plan and must be provided prior to the commencement of works on site.

# 3.14 Emergency Procedures

Suitable means of escape in the case of fire or other emergency must be maintained for all site areas.

Existing escape routes and assembly points for other site users must remain clear at all times

#### 3.15 Restricted Access Areas

Operatives are not permitted to enter areas of the SCC Building occupied by client and must use pre-agreed route(s) to access the site only.

#### 3.16 Confined Spaces

No areas are currently, or anticipated to be, designated as confined spaces as defined by the regulations.

#### 3.17 Working at Height

Where works are undertaken at height or above ceilings, safe working procedures to prevent falls will be required. The Principal Contractor is to confirm appropriate control measures within their Construction Phase Plan.

## 3.18 Reportable Occurrences

Any reportable incident prescribed under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) is to be reported to the Health and Safety Executive within the required notice period for that event and the Client & Contract Administrator are to be notified immediately following occurrence.

#### 3.19 HSE and Local Authority Notices

Notify the Client and Contract Administrator of any notices (improvement or prohibition) or summons received from the Health and Safety Executive or Local Authority.



#### 4.0 ENVIRONMENTAL RESTRICTIONS AND EXISTING ON-SITE RISKS

#### 4.1 Safety Hazards

#### 4.1.1 Site Boundaries and Access

The site boundaries are Attic floor and Third Floor levels.

The site is in close proximity to occupied areas and access routes are shared with building staff and the visiting public.

#### 4.1.2 Restrictions on Deliveries, Waste Collection or Storage

Deliveries and collections must use pre-agreed site access route(s) only and take necessary care to avoid interactions with building users (see also section 3.8).

Waste must only be stored within the work site areas inside the building or tidily in designated areas or skips externally and must be regularly removed using the closest agreed access point.

#### 4.1.3 Adjacent Land Uses

The areas surrounding the SCC building comprise industrial and commercial premises.

## 4.1.4 Existing Storage of Hazardous Materials

None known.

Report any other hazardous materials identified to the Client &, Contract Administrator.

### 4.1.5 Location of Existing Services

Services present within the site include electricity and telephone/data supplies.

The building will remain operational and supplies will need to be maintained during the works, unless otherwise specifically agreed with the Client.

To avoid damage and/or injury the Principal Contractor will be required to take suitable precautions to identify and protect all existing services that may be affected by the works.

#### 4.1.6 Ground Conditions

Not Applicable.

## 4.1.7 Existing Structures



No significant defects are known to be present – report any identified to the Client and Contract Administrator as soon possible.

#### 4.1.8 Previous Structural Modifications

None known

#### 4.1.9 Fire Damage, Ground Shrinkage, Movement, Poor Maintenance

See 4.1.7

#### 4.1.10 Existing Plant & Equipment

Retain in-situ - protect if needed

#### 4.1.11 Existing Health and Safety Information

No existing Health and Safety File relevant to the works exists

No other information is available

#### 4.2 Health Hazards

## 4.2.1 Asbestos

R&D survey report to be provided by the client.

If any previously unknown suspected ACMs are encountered, stop work in the area and contact the Client and Contract Administrator immediately for further instructions.

## 4.2.2 Existing Storage of Hazardous Materials

See 4.1.4 above

#### 4.2.3 Contaminated Land

Not Applicable

# 4.2.4 Existing Structures containing Hazardous Materials

None known

# 4.2.5 Health Risks Arising from Client's Activities

None known. The site areas will be unoccupied by the client during the works



# 4.2.6 Control of Noise and Vibration

Minimise noise and vibration through good management and best practice.

# 4.2.7 Control of Dust

Control dust using dust suppressant tools.



#### 5.0 SIGNIFICANT DESIGN AND CONSTRUCTION HAZARDS

#### 5.1 Design Assumptions and Control Measures

See the Structural Engineer's Construction Hazard Assessments at Appendix D

Any other issues are considered capable of being dealt with by a competent contractor during the normal course of construction.

# 5.2 Arrangements for Coordination of Ongoing Design Work

The Principal Contractor should provide details of contractor-designed temporary works required to maintain stability during the works to the Structural Engineer for timely review prior to commencement and ensure that sufficient information is included in the Construction Phase Plan.

Regular site and project team meetings will also be held during the works.

#### 5.3 Significant Risks Identified during Design

Falls from height during the works

Segregation between the works areas and the remainder of the building.

# 5.4 Materials Requiring Particular Precautions

None known.



#### 6.0 HEALTH AND SAFETY FILE

- 6.1 The Principal Contractor is responsible for preparing the Health and Safety File and is required to collect all relevant information, which could be beneficial to those who will be involved in future construction work to the properties and to pass this information to the Principal Designer (if still appointed). This will include:
  - 1. A brief description of the work carried out.
  - 2. Residual hazards and how they have been dealt with (e.g. surveys or other information concerning asbestos, contaminated land, buried services, etc.)
  - 3. Key structural principles
  - 4. Hazardous materials used (e.g. hazardous substances, special coatings which should not be burnt off.)
  - 5. Information regarding the removal or dismantling of installed plant and equipment (e.g. lifting arrangements.)
  - 6. Health and Safety information about equipment provided for cleaning or maintaining the structure.
  - 7. The nature, location and marking of significant services, including underground services, gas supply equipment, firefighting services, etc.
  - 8. Information and as built drawings of the structure, and adjacent or incorporated plant and equipment.
- 6.2 Before the Certificate of Practical Completion is issued, the Principal Contractor must ensure that all such information has been supplied by themselves and their sub-contractors, to the satisfaction of the Principal Designer. The client's requirements for content and format will be discussed at the pre-start meeting.



#### 7.0 CONSTRUCTION PHASE PLAN CONTENT

- 7.1 The Principal Contractor's Construction Phase Plan should contain the following information as a minimum:
  - A brief description of the project including key dates and details of key members of the project team.
  - Confirmation of how the project will be managed to include:
  - Health and safety aims for the project.
  - Site rules.
  - Arrangements for cooperation, coordination and liaison between project team members.
  - Arrangements for provision of information and involvement with site workers in respect of health and safety.
  - Site induction arrangements.
  - Details of welfare facilities in compliance with Schedule 2 of the CDM Regulations.
  - Fire prevention and emergency procedures.
  - The control of any significant site-specific risks relevant to the project. To include method statements/safe systems of work for:
    - Works undertaken adjacent to occupied areas & storage areas for sensitive materials
    - Work at height/above ceilings
    - Construction traffic management on site
  - Provision of Health and Safety File information.



# APPENDIX A - COVID-19 CONSTRUCTION SECTOR GUIDANCE



# **Construction Sector - Site Operating Procedures Protecting Your Workforce During Coronavirus (Covid-19)**

The Site Operating Procedures have always reflected the latest Government guidance.

Whilst COVID-19 remains widespread across the UK and will need to be managed for some time to come, the lifting of the remaining legal restrictions, including social distancing requirements, from 19 July 2021 means that the Site Operating Procedures are no longer current and remain available as a reference document.

The <u>Use of Face Coverings in Construction</u> has been updated in line with the latest Government guidance that face coverings should be worn in crowded and enclosed spaces when people mix with others that they don't normally meet.

#### **Contents**

Introduction	2
When to Go to Work	
Travel to Work	
Driving at Work	
Site Access and Egress Points	
Hand Washing	4
Toilet Facilities	4
Canteens and Rest Areas	
Changing Facilities, Showers and Drying Rooms	5
Work Planning to Avoid Close Working	
First Aid and Emergency Service Response	
Cleaning	



# Introduction

These Site Operating Procedures (SOP) are based on Government guidance on Working safely during Coronavirus (Covid-19) - Construction and other outdoor work in England; other restrictions and advice may apply in Scotland, Wales and Northern Ireland, as well as in areas subject to a localised lockdown. The objective is to introduce consistent measures on construction sites of all types and sizes and employers and individuals should make every effort to comply.

Where workers enter people's homes, they should follow the Government guidance on <u>Working in Other</u> People's Homes.

The <u>HSE</u> is the relevant enforcing authority for occupational health and safety legislation and guidance to control public health risks in the construction sector. If a site is not complying with the latest Government advice on Coronavirus (Covid-19), it may be subject to enforcement action.

Construction sites need to ensure they are protecting their workforce and minimising the risk of spread of Coronavirus (Covid-19) infection. This includes considering how personnel travel to and from site.

Government guidance for employers in England states "where the social distancing guidelines cannot be followed in full, even through redesigning a particular activity, businesses should consider whether that activity needs to continue for the business to operate, and, if so, take all the mitigating actions possible to reduce the risk of transmission between staff".

The health and safety requirements of any construction activity must not be compromised. If an activity cannot be undertaken safely, it should not take place.

Organisations must have in place effective arrangements for monitoring and reviewing their compliance with Government and industry guidance.

The workforce should be reminded during inductions and daily briefings of the specific social distancing and Coronavirus (Covid-19) control measures necessary to protect them, their colleagues, families and the UK population.

#### When to Go to Work

It is important to understand the following guidelines by which workers should or should not travel to work as outlined below.

Social distancing	Workers in the construction industry should follow the guidance on Social Distancing. Where they cannot work from home, they must follow guidance on Meeting With Others Safely and Safer Travel while travelling to and from work and while at work.  Anyone who is clinically extremely vulnerable to Coronavirus (Covid-19) should follow the latest guidance on shielding.				
Self-isolation	Anyone who has:				
4. (	symptoms of Coronavirus (Covid-19);				
XX	received a positive Coronavirus (Covid-19) test result;				
	a member of their household or support bubble showing symptoms of Coronavirus (Covid-19) or with a positive test result;				
	returned from a country that is not on the <u>travel corridor list;</u> or				
	been contacted by the <u>NHS Test &amp; Trace Service</u> ;				
	must follow the guidance on self-isolation and should not come to site.				
	It is a legal requirement to self-isolate in the event of a positive test result or when told to do so by NHS Test & Trace				
If someone falls ill	If a worker develops symptoms of Coronavirus (Covid-19) whilst at work, they should:				
	Ensure their manager or supervisor is informed				
	Return home immediately				
	Avoid touching anything				



• Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.

They should get a Coronavirus (Covid-19) test.

They must follow <u>Stay at home: guidance for households with possible or confirmed coronavirus (COVID-19) infection</u> and not return to site until they have received a negative test result or, in the event of a positive test result, until they have completed their period of self-isolation and are no longer unwell.

Sites that identify five or more cases within 14 days will need to contact their local Public Health England protection team.

Further information can be found in the 'What to do if a worker has Covid-19 or has to self-isolate' flowchart.

#### **Travel to Work**

#### **Using Private Vehicles**

Wherever possible workers should try not to share a vehicle with those outside their household or support bubble.

If workers have no option but to share transport, they should try to:

- Share with the same individuals and with the minimum number of people (up to a maximum of 6) at any one time
- · Keep the windows open
- Travel side by side or behind other people, rather than facing them, where seating arrangements allow
- Maximise the distance between people
- Wear a face covering
- The vehicle should be cleaned between journeys, especially touch points, using gloves and standard cleaning products.

# **Using Public Transport**

Where public transport is the only option for workers, they:

- Should try to avoid travelling during peak times (05:45 08:15 and 16:00 17:30); and
- Must wear a face covering.

#### Sites should consider:

- Changing and staggering site hours to reduce congestion on public transport
- Parking arrangements for additional vehicles and bicycles
- Providing facilities such as lockers and showers
- Providing hand cleaning facilities at entrances and exits. This should be soap and water wherever possible or hand sanitiser if soap and water are not available
- How someone taken ill would get home.

#### **Driving at Work**

When travelling at work or between site locations, workers should travel alone. If workers have no option but to share a vehicle, then they should follow the Government guidance on Working Safely during Coronavirus (Covid-19) - Vehicles, which provides information for people who work in or from vehicles, including couriers, mobile workers, lorry drivers, on-site transit and work vehicles, field forces and similar.

# Reference Document - 19 July 2021



# Site Access and Egress Points

- Stop all non-essential visitors
- · Consider introducing staggered start and finish times to reduce congestion and contact at all times
- Plan and manage site access and egress points to enable and control social distancing you may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring, including in the case of emergencies
- Introduce one-way systems
- Allow plenty of space between people waiting to enter site
- Use signage:
  - such as floor markings, to ensure current social distancing requirements are maintained between people when queuing
  - reminding workers not to attend if they have symptoms of Coronavirus (Covid-19) and to follow guidelines
- Require all workers to wash their hands for 20 seconds using soap and water when entering and leaving the site
- Regularly clean common contact surfaces in reception, office, access control and delivery areas e.g. entry systems, scanners, turnstiles, screens, telephone handsets and desks, particularly during peak flow times
- Reduce the number of people in attendance at site inductions and consider holding them outdoors wherever possible
- Where loading and offloading arrangements on site will allow it, delivery drivers should remain in their vehicles.
   Where drivers are required to exit their vehicle, they should wash or sanitise their hands before handling any materials
- <u>Drivers</u> must be provided with access to suitable toilet and hand washing facilities and made aware of the social distancing measures in place
- Consider arrangements for monitoring compliance.

#### **Hand Washing**

- Allow regular breaks to wash hands
- Provide additional hand washing facilities (e.g. pop ups) to the usual welfare facilities, particularly on a large spread out site or where there are significant numbers of personnel on site, including plant operators
- Ensure adequate supplies of soap and fresh water are readily available and kept topped up at all times
- Provide hand sanitiser (minimum 60% alcohol based) where hand washing facilities are unavailable
- Regularly clean the hand washing facilities
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

## **Toilet Facilities**

- Restrict the number of people using toilet facilities at any one time (e.g. use a welfare attendant) and use signage, such as floor markings, to maintain current social distancing requirements
- Wash or sanitise hands before and after using the facilities
- Enhance the cleaning regimes for toilet facilities, particularly door handles, locks and the toilet flush
- · Portable toilets should be cleaned and emptied more frequently
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

# Reference Document - 19 July 2021



#### **Canteens and Rest Areas**

Face coverings must be worn in canteens (where food is served), except when seated at a table to eat or drink, and Government guidance on Keeping workers and customers safe during Covid-19 in restaurants should be followed. This Food Standards Agency Checklist may also be helpful.

- Consider increasing the number or size of facilities available on site if possible
- The capacity should be clearly identified at the entry to each facility, and where necessary attendants provided
  to supervise compliance with social distancing measures
- Break times should be staggered to reduce congestion and contact at all times
- Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced
- Frequently clean surfaces that are touched regularly, using standard cleaning products e.g. kettles, refrigerators, microwaves
- Hand cleaning facilities or hand sanitiser should be available at the entrance to any room where people eat and should be used by workers when entering and leaving the area
- Seating and tables should be reconfigured to reduce face to face interactions
- All rubbish should be put straight in the bin and not left for someone else to clear up
- Tables and chairs should be cleaned between each use
- Crockery, eating utensils, cups etc. should be disposable or washed and dried between use
- Payments should be taken by contactless card wherever possible
- Canteen staff should wash their hands often with soap and water for at least 20 seconds before and after handling food
- Canteen staff and workers may use the same rest areas if they apply the same social distancing measures
- Consider arrangements for monitoring compliance.

#### Changing Facilities, Showers and Drying Rooms

- Consider increasing the number or size of facilities available on site if possible
- Based on the size of each facility, determine how many people can use it at any one time to maintain current social distancing requirements
- Restrict the number of people using these facilities at any one time e.g. use a welfare attendant
- Introduce staggered start and finish times to reduce congestion and contact at all times
- Introduce enhanced cleaning of all facilities throughout the day and at the end of each day
- Provide suitable and sufficient rubbish bins in these areas with regular removal and disposal.

# Work Planning to Avoid Close Working

Sites and work need to be planned and organised to avoid crowding and minimise the risk of spread of infection by following Government guidance and the advice within these Site Operating Procedures.

#### **Hierarchy of Controls**

If you are not able to work whilst maintaining current social distancing requirements, you should consider whether the activity should continue and, if so, risk assess it using the hierarchy of controls below and against any sector-specific guidance. The results of risk assessments should be shared with the workforce and this <u>poster</u> displayed in the workplace.



_	T					
Eliminate	Workers who are unwell with symptoms of Coronavirus (Covid-19) should not travel to or attend the workplace					
	Rearrange tasks to enable them to be done by one person, or in a way that maintains current social distancing requirements					
	Avoid skin to skin contact and face to face working					
	Stairs should be used in preference to lifts or hoists and consider one ways systems					
	Consider alternative or additional mechanical aids to reduce worker interface					
	Site Meetings					
	Only absolutely necessary meeting participants should attend					
	Attendees should maintain current social distancing requirements					
	Rooms should be well ventilated / windows opened to allow fresh air circulation					
	Hold meetings in open areas where possible					
Reduce	Risk mitigation, where current social distancing requirements cannot be maintained, could include the following:					
	Minimise the frequency and time workers are working together					
	Minimise the number of workers involved in tasks					
	Workers should work side by side, or facing away from each other, rather than face to face					
	Lower the worker capacity of lifts and hoists to reduce congestion and contact at all times					
	Regularly clean common touchpoints, doors, buttons, handles, vehicle cabs, tools, equipment etc.					
	Increase ventilation in enclosed spaces					
	Workers should wash their hands before and after using any equipment					
Isolate	Keep groups of workers:					
	Together in teams e.g. do not change workers within teams					
	As small as possible					
	Away from other workers where possible					
Control	Consider introducing an enhanced authorisation process					
	Provide additional supervision to monitor and manage compliance					
PPE	Coronavirus (COVID-19) needs to be managed through social distancing, hygiene and the hierarchy of control and not through the use of PPE					
	Workplaces should not encourage the precautionary use of extra PPE to protect against Coronavirus (COVID-19)					
Behaviours	The measures necessary to minimise the risk of spread of infection rely on everyone in the industry taking responsibility for their actions and behaviours					
	Encourage an open and collaborative approach between workers and employers on site where any issues can be openly discussed and addressed					

# Reference Document - 19 July 2021



# First Aid and Emergency Service Response

The primary responsibility is to preserve life and first aid should be administered if required and until the emergency services attend.

- When planning site activities, the provision of adequate first aid resources must be agreed between the relevant parties on site
- Emergency plans including contact details should be kept up to date
- Consideration must also be given to potential delays in emergency services response, due to the current pressure on resources
- Consider preventing or rescheduling high-risk work or providing additional competent first aid or trauma resources.

# Cleaning

Enhanced cleaning procedures should be in place across the site, particularly in communal areas and at touch points including:

- Taps and washing facilities
- · Toilet flush and seats
- · Door handles and push plates
- · Hand rails on staircases and corridors
- Lift and hoist controls
- Machinery and equipment controls
- All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.
- Telephone equipment
- · Key boards, photocopiers and other office equipment
- Rubbish collection and storage points should be increased and emptied regularly throughout and at the end of each day.



# **APPENDIX B - RULES FOR VISITING CONTRACTORS**



# **Museum Rules for Visiting Contractors at the SCC**

This sheet sets out the Museum rules for all visiting contractors to the Study Collections Centre (SCC), and should be issued to all relevant persons for information.

We are required under the Health and Safety at Work etc. Act 1974 to ensure that a safe place of work exists for all those who have cause to use the premises. This duty extends to not only staff and visitors but other users, including contractors.

It is the responsibility of every contractor to ensure that his site supervisor receives a copy of these rules and that his employees are informed of those rules which affect them.

These rules are not negotiable and the Museum requires, as part of the work contract, that they are strictly adhered to.

Any willful ignoring of these rules will result in the person being banned from the Museum site and any further breach may result in the company being barred from any further work for the Museum.

#### **Vehicle Access and Parking**

Access to the SCC is via the automatic gate with use of the intercom. There is a barrier across the access road which is closed by Peninsula Security outside of the hours 9am to 6pm. Access could be arranged outside of these hours by arrangement with the Collections Manager. Contractors should be reminded of the rules while driving a vehicle on site which must be observed. Mobile telephones must not be used whilst driving. The building grounds are used by pedestrians as well so caution should be used when manoeuvring.

There is space in the SCC grounds to provide contractor parking. If there is equipment to unload, inform the staff and arrangements can be made for the easiest access into the building.

# Signing In and Out of Building and Access to Locked Areas

Every person must sign in on the board on the entry door, then wipe out their entry when leaving. Once on site the visitor log must be filled in before work commences. If entry to locked areas of the store is required to carry out the intended, access can be arranged by request at the time with either the Collections manger or a Senior Key Holder.

#### **Smoking**

No smoking except in the designated location is permitted anywhere in the Museum at any time, including courtyard areas.

#### Hot Works, Working at Height (at any height where there is a risk of a fall), Electrical Work

All works which have any element as above must be agreed in advance with the Collections Manager or Collections Assistant (Security) and a Permit to Work obtained from them. This may also require the authorized isolation of the fire alarm system prior to the commencement of any hot 'work'. Any



Work activity which creates flame, sparks, smoke or dust must take into account the smoke and heat fire detection units. Any deactivation of alarms should be authorized by the Collections Assistant

(Security). Work may not commence until this precaution has been confirmed. Those persons carrying out 'hot works' are required to supply their own fire extinguishers which are appropriate to the risk identified in the risk assessment.

Suitable risk assessments should be completed as required by the Management of Health and Safety at Work Regulations 1999 before the work begins.

Any contractor refusing to complete a work permit will not be permitted to work on site.

#### **Equipment brought on site**

All equipment used by a Contractor or Supplier must be in good working order, comply with appropriate safety and electrical legislation, should be PAT tested and visually inspected before use.

Equipment left on site shall be kept in a safe and secure manner at the risk of the Contractor or Supplier.

All portable appliances used outside of buildings and on construction sites should, where possible, be battery operated or be suitable for use with 110 volt power supply with additional consideration given to the positioning of the trailing leads to avoid slip and trip hazards.

#### **Personal protection**

Contractors should ensure they wear appropriate personal protective clothing as specified in the risk assessment to include, safety footwear, head protection, ear protection, eye protection, suitable gloves and face protection as required by the activity risk assessment.

#### Competence

All those persons employed to carry out work at the SCC must be competent. They must have the required skills, knowledge, ability, training and experience to complete their work safely and effectively.

#### Construction (Design and Management) Regulations 2015, Contractors and the self-employed

The Horniman Museum has strict controls in place to comply with the Construction (Design and Management) Regulations 2015 (CDM2015). Work classed as construction within CDM2015 (e.g. building maintenance and repair, redecoration, high pressure water jetting, installation of electrical or IT cabling), which involves more than one contractor, requires one of the contractors to be appointed in writing as the Principal Contractor and Principal Designer where necessary, by the Museum. All such work, whether or not involving one contractor, will require a written Construction Phase Plan in place prior to work commencing.

Under the CDM 2015 Regulations, the Horniman Museum will be the 'client' in respect of any relevant works undertaken. The 'client' is required to inform the Health and Safety Executive (HSE) about certain construction projects. A project becomes notifiable to the HSE if the construction work is expected to last longer than 30 working days and have more than 20 workers working at the same



time at any point on the project or if the work will exceed 500 person days. The client for the construction work is required to send the notification to HSE, either on-line (on form F10) or in writing.

It is a requirement under the CDM 2015 Regulations that the Principal Contractor manages the Construction Phase Plan and ensures contractors and self-employed people working on the site are made aware of their duties accordingly. All contractors must ensure that full induction of his/her own staff, subcontractors and the self-employed is carried out and that these site rules are documented and signed by all inductees to demonstrate full understanding by all persons working on site.

The Principal Contractor is required to check the competence of any domestic named or nominated contractor for the purposes of complying with the Construction (Design and Management) Regulations 2015.

#### Food and drink

No food or drink of any type may be taken into, or consumed within the stored collections areas, plant rooms or in areas where work is being undertaken.

#### **Radios**

No music devices, radio headphones or MP3 players may be used within the SCC unless agreed with the Collections Manager or Collections Assistant (Security).

#### Language

Foul, offensive or immoderate language is not acceptable within the SCC or its grounds at any time. Any willful ignoring of this rule will result in the person being banned from the Museum site and any further breach may result in the company being barred from any further work for the Museum. In hot weather, shirts must be kept on at all times across the site.

## Fire alarms and evacuations

Fire alarms are tested every Friday morning at around 10am. They will sound for a few seconds only and then stop.

At all other times when the fire alarm sounds, all contractors must make safe any equipment being used and must evacuate the building immediately by the nearest exit and gather in front of the clock tower.

The contractor must nominate a member of staff to be responsible for checking that all of the staff are clear of the building and report such to the Senior Key Holder organising the evacuated staff. Contractors must not re-enter the building without permission from the Incident Controller.

#### **Accidents and work related illness**

All accidents and work related illness should be reported to the Collections Manager or Senior Keyholder and the relevant forms filled in.



Contractors should notify the SCC staff of any known disability (e.g. hearing impairment, colour blindness), health condition (including allergies) or language difficulty which could affect their safety and/or the safety of others whilst undertaking work at the SCC.

### **Toilets**

Toilet facilities are available for works inside the building. If construction works are being undertaken outside of the building that would mean bringing in dirt on work boots, an external porta loo should be arranged for.

#### **Materials**

The delivery and storage of materials and the routes and times of entry into the Museum must be agreed with the Collections Manager or Senior Key Holder in advance.

#### **Waste**

The Contractor is responsible for removing all unused materials and/or waste and recyclable materials by the completion of the works and at the end of each work period. Skips and bins on the site shall not be used.

#### **Work Site**

Contractors should restrict their movements to the designated work site and agreed access routes.

#### Works

No work shall be carried out without the prior knowledge and agreement of the Collections Manager or Senior Key Holder.

#### **Telephones**

The Museum phone system is not to be used by Contractors except when it is crucial to the completion or continuation of works or in cases of emergency. It should also be noted that the use of mobile phones within the Museum building should not cause nuisance or annoyance to staff or visitors.

### **Late/Lone Working**

Whilst every effort is made to ensure that works are carried out during the normal working day it is recognised that on occasion it may be necessary to undertake work out of hours. Any contractor working outside normal hours will be required to make arrangements with either the Collections Manager or the Senior Key Holder as to whether this can be accommodated.

Lone working can only be carried out by workers who are regular visitors, familiar with the SCC site and its procedures. New visiting contractors should be accompanied by a member of staff at all times unless they can have a safe area of work set up for them. Anyone who isn't a member of staff



should never handle, touch, or attempt to move a Museum object, storage box or trolley. If this is required to carry out works, find a member of staff to carry out the move instead.

Any contractor or delivery person failing to take reasonable Health, Safety, and Operational Instruction from security staff or management will be told to leave the premises, their superiors will be informed and they will be banned from accessing or working on the Horniman sites in future.

Signed	
Print Name	
Company	
,	
Date	



# APPENDIX C - CONISBEE CONSTRUCTION HAZARD ASSESSMENT



# CONSTRUCTION HAZARD ASSESSMENT STRUCTURAL DESIGN for

# Horniman Museum, SCC Building (Greenwich) – Ceiling Works

It is assumed that the project is to be undertaken by experienced and competent designers and contractors who are aware of the common risks associated with construction processes.

The summary below is intended to help all parties recognise the less common hazards which may be encountered in this particular project through an understanding of the structural principles involved and the assumptions made by the design engineer.

London

1–5 Offord Street London N1 1DH Telephone 020 7700 6666

#### Norwich

6 Upper King Street Norwich NR3 1HA Telephone 01603 628 074

#### Cambridge

16 Signet Court Swann Road Cambridge CB5 8LA Telephone 01223 656 058

design@conisbee.co.uk www.conisbee.co.uk

#### Directors

Tim Attwood BSc CEng MIStructE
Tom Beaven BEng (Hons) CEng MIStructE
Allan Dunsmore BEng (Hons) CEng FIStructE MICE
Richard Dobson MEng CEng MIStructE
Paul Hartfree IEng MICE MCIHT FGS
Ben Heath BEng CEng MIStructE
Kevin Clark Head of Heritage Engineering, BSc (Hons) PhD DIC
CEng MICE, Conservation accredited engineer (CARE)

# Associates David Richards BEng (Hons) ACGI CEng MIStructE

Gary Johns
Tom Lefever BEng (Hons) CEng C.WEM MICE MCIWEM
Nigel Nicholls IEng AMIStructE
Denis Kealy BEng (Hons) CEng MIEI MIStructE
Christina Kennedy MEng (Hons) CEng MIStructE
Joel Waugh Tech Eng MICE

Adam Crump BSc (Hons) Civil Engineering

Beena Doal Head of Finance

#### Consultants

Alan Conisbee BA BAI CEng MIStructE
Conservation Accredited Engineer (CARE)
Chris Boydell BSc CEng MIStructE FICE
Bob Stagg BSc (Hons) CEng FIstructE MICE
Terry Girdler BSc (Hons) Eng MSc CEng FICE MIStructE
Conservation Accredited Engineer (CARE)

Conisbee is a trading name of Alan Conisbee and Associates Limited Registered in England No. 3958459

Ref: 210572/S Wilkinson

**Date:** 5 Jan 2022

Status: For Information

Version: 1





Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works		Project No: 210572			
Consideration Ye			Comment		
1.0	NEW SUBSTRUCTURE AND FOUNDATIONS	NO	No Applicable		
1.1	Utilities				
1.1.1	Has a public utilities search been implemented?				
1.1.2	If not why not?				
1.1.3	Which utilities may affect the project?				
1.2	Site Investigations				
1.2.1	Has a desk study been undertaken?				
1.2.2	Has a soil investigation been undertaken?				
1.2.3	If not why not?				
1.2.4	Does the investigation highlight any:				
	o Exceptional strata				
	o Water problems				
	o Contamination				
	o Obstructions				
	o Other issues?				
1.3	Site Strip				
1.3.1	What is the anticipated depth of site strip?				
1.3.2	Are any special precautions needed when excavating and removing material?				
1.4	Foundations				
1.4.1	Describe the proposed foundations in outline.				
1.4.2	Do any excavations that require hand finishing exceed 1.2 m depth?				
1.4.3	Are any excavations envisaged close to				



Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works			Project No: 210572
Consideration			Comment
	adjoining structures?		
1.4.4	If yes, have their foundations been examined and recorded?		
1.4.5	Are any special shoring procedures needed?		
1.4.6	Have any existing underground services or obstructions been identified?		
1.4.7	Are any excavations close to existing services?		
2.0	SUPERSTRUCTURE – NEW BUILD AND EXTENSIONS	NO	Not Applicable
2.1	General		
2.1.1	What structural system is proposed?		
2.1.2	How is stability to be achieved?		
2.1.3	If a frame is being used will any special sequence of craneage be needed?		
2.1.4	Will any temporary works be necessary to ensure stability during erection?		
2.2	Walling and Cladding		
2.2.1	What construction is envisaged for the external envelope of the building?		
2.2.2	What construction is envisaged for internal partitions?		
2.2.3	Does walling or cladding provide either temporary or long-term stability to the building?		
2.2.4	Can all units be safely lifted and placed in position by one person?		



Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works			Project No: 210572
Consideration			Comment
2.2.5	Are walls stable in the temporary condition before floors/roofs applied?		
2.3	Beams and Lintels		
2.3.1	What beams and lintels are envisaged in the works?		
2.3.2	Are special (in terms of size, weight, awkward shape or requiring assembly work on site) beams and lintels necessary?		
2.3.3	Are there any special handling and erection sequences which need to be followed?		
	Are beam weights, moments and reactions indicated on the drawing?		
2.4	Floors and Stairs		
2.4.1	Outline the proposed construction of floors and stairs.		
2.4.2	Define the imposed load capacity required		
2.4.3	Has any special allowance for construction loads been allowed?		
2.4.4	Is the design by others?		
2.4.5	Is craneage necessary?		
2.5	Roof		
2.5.1	Describe the proposed roof construction.		
2.5.2	Define the imposed load capacity required.		
2.5.3	Is design by others?		
2.5.4	Is craneage necessary?		
2.5.5	Is the erection sequence important for stability during construction?		



Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works			Project No: 210572
Consideration			Comment
3.0	INFRASTRUCTURE AND EXTERNAL WORKS	NO	Not Applicable
3.1	Describe the Highway works and any issues related to their construction that are unusual or represent significant hazards.		
3.2	Describe the drainage works and any issues related to their construction that are unusual or represent significant hazards		
3.3	Are any excavations close to existing services, or sensitive uses?		
3.4	Describe any external works, retaining walls, earthworks etc.		
3.5	Is design by others?		
3.6	Any special sequence of work or limitation on loading, including temporary loads from construction?		
4.0	SUPERSTRUCTURE REFURBISHMENT, REPAIRS AND STRUCTURAL ALTERATIONS	YES	
4.1	Is there an asbestos register for the building?  If yes, are areas to be investigated affected and are precautions required or clearance necessary ahead of any investigations or construction works?  If no, lead consultant to organise asbestos survey ahead of any investigations	YES	An updated R&D survey report will provided by the client prior to the start of works
4.2	What is the construction and load bearing elements of the existing building?	YES	Brickwork walls, steel and concrete filler joist floors, cut timber roof structure.



Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works		Project No: 210572	
Cons	ideration	Yes/No	Comment
4.3	What provides stability at present?	YES	Brickwork walls, steel and concrete filler joist floors, cut timber roof structure.
4.4	What is the nature of the proposed works?	YES	Repair and strengthening of timber ceiling structures, provision of new safe access walkways
4.5	What will provide stability in future?	YES	Existing structure, timber to timber joist to truss connections to be enhanced.
4.6	Have any major structural defects been discovered?	YES	Third floor lathe and plaster ceilings are highly distorted and at risk of failure (timber joists and plaster)
4.7	Are any special precautions or procedures necessary before the works begin in earnest?	YES	The contractor must provide temporary support to the ceiling at each truss line when installing strengthening measures and avoid applying any additional load to the ceiling back during works.
4.8	Are any unusual risks anticipated in the execution of the works?	YES	The contractor must use appropriate fall protection measures when working above the ceilings to mitigate risks to personnel and damage to collection items if debris were to fall through accidental damage.
4.9	Are there any special sequences of alteration, repair or erection which need to be followed?	YES	Provide temporary support to the ceiling underside at each truss line when installing strengthening measures.
4.10	Define imposed load capacities to be achieved.	YES	New walkways to achieve 0.75kN/m <sup>2</sup>



Project Title: Horniman Museum SCC Building (Greenwich) – Ceiling Works			Project No: 210572	
Cons	ideration	Yes/No	Comment	
4.11	Are any walls, floors or their coverings being removed in the works which might lead to temporary loss of stability in the building?	NO		
5.0	BUILDING IN USE			
5.1	Are any elements of the structure expected to fatigue or wear or require ongoing maintenance and repair work during the design life of the building?	YES	Safe access walkways and handrails to be periodically inspected as recommended by installer.	
5.2	Are there any elements in the civil engineering works (e.g., pumps, catch pits, silt traps, permeable paving) that require maintenance during the design life of the building?	NO		
5.3	Are regular ongoing inspections required – define frequency.	NO		
6.0	DEMOLITION AT THE END OF DESIGN LIFE			
6.1	Are any special procedures needed due to method of construction or erection?	NO		



Signature of Project Engineer:	Shhu	Date:	05.01.22
Signature of Director/checker	Shhu	Date:	05.01.22